1 Teaching programming using scripting languages

Peter Warren

December 2001 **Journal of Computing Sciences in Colleges** , Volume 17 Issue 2

Publisher: Consortium for Computing Sciences in Colleges

Full text available: Pdf (56.11 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 68, Citation Count: 3

This paper looks at the potential for using scripting languages to teach programming. demonstrates that the so-called "system programming languages" such as Java and are not suitable to teaching novices. Conversely the modern "scripting languages" ...

2 Models and languages for parallel computation

David B. Skillicorn, Domenico Talia

June 1998 **Computing Surveys (CSUR)** , Volume 30 Issue 2

Publisher: ACM Request Permissions

Full text available: Pdf (298.05 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 78, Downloads (12 Months): 582, Citation Count: 56

We survey parallel programming models and languages using six criteria to assess th suitability for realistic portable parallel programming. We argue that an ideal model s by easy to program, should have a software development methodology, should ...

Keywords: general-purpose parallel computation, logic programming languages, obj oriented languages, parallel programming languages, parallel programming models, software development methods, taxonomy

3 GCspy: an adaptable heap visualisation framework

Tony Printezis, Richard Jones

November 2002 **OOPSLA '02:** Proceedings of the 17th ACM SIGPLAN conference on Obje oriented programming, systems, languages, and applications

Publisher: ACM Request Permissions

Full text available: Pdf (215.66 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 10, Downloads (12 Months): 45, Citation Count: 6

GCspy is an architectural framework for the collection, transmission, storage and rep memory management behaviour. It makes new contributions to the understanding o dynamic memory behaviour of programming languages (and especially object-oriente

Keywords: Java, garbage collection, language implementation, memory manageme visualisation of objects

Also published in:
November 2002 **SIGPLAN Notices** Volume 37 Issue 11

4 Real Java for real time - gain and pain
Anders Nilsson, Torbjörn Ekman, Klas Nilsson
October 2002 **CASES '02:** Proceedings of the 2002 international conference on Compilers architecture, and synthesis for embedded systems
Publisher: ACM
Full text available: Pdf (154.38 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 40, Citation Count: 3

The Java programming language, being a portable and safe object-oriented language gained much interest among embedded and real-time systems developers. However, standard Java implementations exhibit problems with performance, memory footprint and ...

Keywords: embedded systems, real-time Java, rtj

5 A framework for object oriented hardware specification, verification, and synthesi
T. Kuhn, T. Oppold, M. Winterholer, W. Rosenstiel, Marc Edwards, Yaron Kashai
June 2001 **DAC '01:** Proceedings of the 38th annual Design Automation Conference
Publisher: ACM Request Permissions
Full text available: Pdf (222.17 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 13, Citation Count: 7

We describe two things. First, we present a uniform framework for object oriented specification and verification of hardware. For this purpose the object oriented langua "e" is introduced along with a powerful run-time environment that ...

Keywords: high-level synthesis, object oriented hardware modeling, verification

6 Template meta-programming for Haskell
Tim Sheard, Simon Peyton Jones
October 2002 **Haskell '02:** Proceedings of the 2002 ACM SIGPLAN workshop on Haskell
Publisher: ACM Request Permissions
Full text available: Pdf (169.20 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 5, Downloads (12 Months): 43, Citation Count: 51

We propose a new extension to the purely functional programming language Haskell supports *compile-time meta-programming*. The purpose of the system is to support t *algorithmic* construction of programs at compile-time.The ability to ...

Keywords: meta programming, templates

7 Efficient and precise datarace detection for multithreaded object-oriented prograr
Jong-Deok Choi, Keunwoo Lee, Alexey Loginov, Robert O'Callahan, Vivek Sarkar, Manu Sridharan
June 2002 **PLDI '02:** Proceedings of the ACM SIGPLAN 2002 Conference on Programmin

language design and implementation

Publisher: ACM Request Permissions

Full text available: Pdf (171.13 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 25, Downloads (12 Months): 134, Citation Count: 65

We present a novel approach to dynamic datarace detection for multithreaded object oriented programs. Past techniques for on-the-fly datarace detection either sacrificed precision for performance, leading to many false positive datarace reports, or maintained ...

Keywords: dataraces, debugging, multithreaded programming, object-oriented programming, parallel programs, race conditions, static-dynamic co-analysis, synchronization

Also published in:
May 2002 **SIGPLAN Notices** Volume 37 Issue 5

8 The Desert environment

Steven P. Reiss

October 1999 **Transactions on Software Engineering and Methodology (TOSEM)** , Volume 8 Issue 4

Publisher: ACM Request Permissions

Full text available: Pdf (868.64 KB) Additional Information: full citation, abstract, references, cited by, in terms, review

Bibliometrics: Downloads (6 Weeks): 2, Downloads (12 Months): 50, Citation Count: 8

The Desert software engineering environment is a suite of tools developed to enhanc programmer productivity through increased tool integration. It introduces an inexpen form of data integration to provide additional tool capabilities and information ...

Keywords: integrated programming environments, program editors

9 A software engineering perspective on algorithmics

Karsten Weihe

March 2001 **Computing Surveys (CSUR)** , Volume 33 Issue 1

Publisher: ACM Request Permissions

Full text available: Pdf (1.62 MB) Additional Information: full citation, abstract, references, index term review

Bibliometrics: Downloads (6 Weeks): 29, Downloads (12 Months): 246, Citation Count: 1

An algorithm component is an implementation of an algorithm which is not intended a stand-alone module, but to perform a specific task within a large software package even within several distinct software packages. Therefore, ...

Keywords: algorithm engineering

10 Transformations for model checking distributed Java programs

Scott D. Stoller, Yanhong A. Liu

May 2001 **SPIN '01:** Proceedings of the 8th international SPIN workshop on Model chec of software

Publisher: Springer-Verlag New York, Inc.

Full text available: Pdf (108.43 KB) Additional Information: full citation, abstract, references, cited by

Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 8, Citation Count: 3

This paper describes three program transformations that extend the scope of model checkers for Java programs to include distributed programs, *i.e.*, multi-process progr The transformations combine multiple processes into a single process, replace ...

11 The Java syntactic extender (JSE)

Jonthan Bachrach, Keith Playford

November 2001 **OOPSLA '01:** Proceedings of the 16th ACM SIGPLAN conference on Obje oriented programming, systems, languages, and applications

Publisher: ACM Request Permissions

Full text available: Pdf (198.11 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 39, Citation Count: 20

The ability to extend a language with new syntactic forms is a powerful tool. A suffici flexible macro system allows programmers to build from a common base towards a language designed specifically for their problem domain. However, macro facilities ...

Also published in:

November 2001 **SIGPLAN Notices** Volume 36 Issue 11

12 Componential set-based analysis

Cormac Flanagan, Matthias Felleisen

March 1999 **Transactions on Programming Languages and Systems (TOPLAS)**, Vo 21 Issue 2

Publisher: ACM Request Permissions

Full text available: Pdf (497.41 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 35, Citation Count: 12

Set-based analysis (SBA) produces good predictions about the behavior of functional object-oriented programs. The analysis proceeds by inferring constraints that charact the data flow relationships of the analyzed program. Experiences ...

Keywords: constraint-based analysis, program analysis, scheme, soft typing, static debugging

13 Proof linking: modular verification of mobile programs in the presence of lazy, dynamic linking

Philip W. L. Fong, Robert D. Cameron

October 2000 **Transactions on Software Engineering and Methodology (TOSEM)**, ' 9 Issue 4

Publisher: ACM Request Permissions

Full text available: Pdf (233.60 KB) Additional Information: full citation, abstract, references, cited by, in terms, review

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 32, Citation Count: 1

Although mobile code systems typically employ link-time code verifiers to protect hos computers from potentially malicious code, implementation flaws in the verifiers may leave the host system vulnerable to attack. Compounding the inherent complexity ...

Keywords: Java, correctness conditions, dynamic linking, mobile code, modularity, p linking, safety, verification protocol, virtual machine architecture

14 Jiazzi: new-age components for old-fasioned Java

Sean McDirmid, Matthew Flatt, Wilson C. Hsieh
November 2001 **OOPSLA '01:** Proceedings of the 16th ACM SIGPLAN conference on Obje oriented programming, systems, languages, and applications

Publisher: ACM Request Permissions

Full text available: Pdf (156.83 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 26, Citation Count: 44

We present Jiazzi, a system that enables the construction of large-scale binary components in Java. Jiazzi components can be thought of as generalizations of Java packages with added support for external linking and separate compilation. Jiazzi components ...

Also published in:
November 2001 **SIGPLAN Notices** Volume 36 Issue 11

15 At the forge: JavaBeans
Reuven M. Lerner
June 2001 **Linux Journal** , Volume 2001 Issue 86
Publisher: Specialized Systems Consultants, Inc.
Full text available: Html (19.61 KB) Additional Information: full citation, index terms

Bibliometrics: Downloads (6 Weeks): 0, Downloads (12 Months): 14, Citation Count: 0

16 Programming languages for mobile code
Tommy Thorn
September 1997 **Computing Surveys (CSUR)** , Volume 29 Issue 3
Publisher: ACM Request Permissions

Full text available: Pdf (393.65 KB) Additional Information: full citation, abstract, references, cited by, in terms, review

Bibliometrics: Downloads (6 Weeks): 20, Downloads (12 Months): 193, Citation Count: 23

Sun's announcement of the programming language Java more that anything populari the notion of mobile code, that is, programs traveling on a heterogeneous network ar automatically executing upon arrival at the destination. We describe several classes .

Keywords: Java, Limbo, Objective Caml, Obliq, Safe-Tcl, distribution, formal metho mobile code, network programming, object orientation, portability, safety, security, telescript

17 Composable and compilable macros:: you want it when?
Matthew Flatt
October 2002 **ICFP '02:** Proceedings of the seventh ACM SIGPLAN international conferen Functional programming

Publisher: ACM Request Permissions

Full text available: Pdf (162.46 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 43, Citation Count: 19

Many macro systems, especially for Lisp and Scheme, allow macro transformers to perform general computation. Moreover, the language for implementing compile-time macro transformers is usually the same as the language for implementing run-time functions. ...

Keywords: language tower, macros, modules

Also published in:
September 2002 **SIGPLAN Notices** Volume 37 Issue 9

18 Web II: web-based simulation of systems described by partial differential equatio
Manuel Alfonseca, Juan de Lara, Hans Vangheluwe
December 2001 **WSC '01:** Proceedings of the 33nd conference on Winter simulation
Publisher: IEEE Computer Society
Full text available: Pdf (538.55 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 12, Citation Count: 1

This paper describes how to take advantage of Internet services and object technolo solve 2D partial differential equations (PDEs) in a distributed manner. This is accomp by means of a distributed object oriented continuous simulation language ...

19 Techniques for obtaining high performance in Java programs
Iffat H. Kazi, Howard H. Chen, Berdenia Stanley, David J. Lilja
September 2000 **Computing Surveys (CSUR)** , Volume 32 Issue 3
Publisher: ACM Request Permissions
Full text available: Pdf (816.13 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 56, Downloads (12 Months): 488, Citation Count: 7

This survey describes research directions in techniques to improve the performance c programs written in the Java programming language. The standard technique for Jav execution is interpretation, which provides for extensive portability of programs. ...

Keywords: Java, Java virtual machine, bytecode-to-source translators, direct compi dynamic compilation, interpreters, just-in-time compilers

20 Type-preserving garbage collectors
Daniel C. Wang, Andrew W. Appel
January 2001 **POPL '01:** Proceedings of the 28th ACM SIGPLAN-SIGACT symposium on Principles of programming languages
Publisher: ACM Request Permissions
Full text available: Pdf (221.47 KB) Additional Information: full citation, abstract, references, cited by, in terms

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 23, Citation Count: 17

By combining existing type systems with standard type-based compilation techniques describe how to write strongly typed programs that include a function that acts as a t racing garbage collector for the program. Since the garbage collector is an ...

Also published in:
March 2001 **SIGPLAN Notices** Volume 36 Issue 3

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